

PROGRAM EVALUATION

COMPUTER SERVICES CONTRACTS

Committee for Program Review & Investigation

Research Report No. 193
Legislative Research Commission
Frankfort, Kentucky

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COMPUTER SERVICES CONTRACTS

Prepared by:
Jeff Kell, Project Manager
Sarah Hayes

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FOREWORD

Executive Order 81-1028, effective December 16, 1981, changes some of the organizational descriptions in this report. However, the report's findings and recommendations remain valid.

Computers and computer services contracts have been a matter of controversy in state government for a number of years. Recent reorganization of computer-related functions in the executive branch lead us to believe that comprehensive and positive action in this important area is at last being taken.

The Committee for Program Review and Investigation, at the request of the Personal Services Contract Review Subcommittee, has reviewed computer services contracts to determine if this work could not be done more cheaply and efficiently in-house. This review also provides background and analysis for evaluating the effectiveness of the newly reorganized computer-related functions that were placed within the Personnel and Management Cabinet.

The committee staff participating in this project would like to express its thanks for the cooperation and help received from individuals within the departments of the new Cabinet for Personnel and Management, the Department for Natural Resources and Environmental Protection, the Department for Human Resources, and the Department of Finance. Jeffrey Kell was Project Manager and Sarah Hayes was his principal assistant. The cover was designed by University of Kentucky Art Department student, John Cox.

VIC HELLARD, JR.
Director

The Capitol
Frankfort, Kentucky

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SUMMARY

The Commonwealth of Kentucky possesses one of the finest computer installations that can be found in the private or public sector. Despite this, agencies of state government have been contracting for a variety of computer services. "Agencies," for the purposes of this review, include both large and small departments, boards, and councils, typically located in Frankfort, Kentucky. Also included are institutions of higher learning.

The Personal Services Contract Review Subcommittee of the Legislative Research Commission requested that the Program Review and Investigation Committee review computer services contracts to determine why they are so numerous and why they should be necessary when Kentucky has such a sophisticated computer hardware operation. Committee staff subsequently reviewed, analyzed, and categorized computer services contracts on file in the Department of Finance for FY 1978 through FY 1981.

Questions regarding computers and their use have been raised in Kentucky state government since the 1966 General Assembly passed a resolution requesting a study of the feasibility of a data processing system for state government. Specific complaints have been aired about computer services consultant contracts since the Nunn administration in 1971. General confusion has also existed for the past twenty years about which agencies are responsible for which areas of data processing. The only concrete action taken to define specific responsibilities for computer-related activities was the consolidation of computer hardware under the Bureau of Computer Services in 1973. Since then, computer software and systems development activities have remained in an uncontrolled state. Partly as a result of this, personal services contracts for software and systems development account for approximately sixty percent of all computer services contracts. Explosive growth and a lack of management understanding of data processing have contributed to internal coordination problems, as was pointed out by Governor Brown's Executive Management Commission in 1980.

Governor Brown implemented the recommendations of his Management Commission by creating a new Department of Professional Support within the new Personnel and Management Cabinet. The intent of this new department is to provide management control over systems development work in state government, whether it be done in-house or by contract. To facilitate this process, many systems development professionals, mostly classified as Programmer/Analysts, have been transferred to the new department and provide the manpower to work on statewide computer systems applications as well as individual agency applications.

Although the goal is to reduce the number of contracts for systems design, there will continue to be a need for them until the new department is fully operational and until an improvement is made in state salaries for computer professionals. To assist the new department in accomplishing its goal of implementing the recommendations of the Gover-

nor's Executive Management Commission regarding data processing and to reduce the Commonwealth's dependency upon computer services contractors, it is recommended that:

1. The Department of Personnel take immediate action to revise the classification system and/or the salary scales for employees in the Data Processing Group to make state government more competitive with the private sector in this area.

State government does not presently have the capacity to do much of the work that is typically contracted. To determine if it is worthwhile to develop the necessary capacity it would be desirable to accurately gauge the cost-benefits of in-house developed products versus contracted products. Such a determination would necessitate making comparisons of the number and type of manhours required for both internally and externally produced products and services. However, these comparisons cannot be made now because contractors are not required to submit estimates of manhours by type necessary for a particular job. To make informed decisions possible regarding contracting versus in-house development, it is recommended that:

2. The Department of Professional Support require all computer services contractors to submit estimates of manpower, by job classification and billing rate, necessary to do the work specified.

The Department of Professional Support is still in a process of organization and development. Budgetary approaches and considerations for the upcoming biennium are also in the process of definition. Therefore, it is recommended that:

3. The operations of the Department of Professional Support should be reviewed in 1982 to determine effectiveness in meeting stated goals and objectives, especially as they relate to the management of computer services contracts.

Just prior to publication of this report, the Department of Professional Support was merged with the Department of Technical Services and renamed the Department of Information Systems (Executive Order 81-1028). This was part of the larger merger of the Personnel and Management Cabinet with the Department of Finance. Although these actions outdate some organizational references in this report, the basic findings and recommendations remain valid.

CHAPTER I

INTRODUCTION

Since computers first made their appearance in state government approximately twenty-four years ago, they have played an increasingly important role in the management of the executive, legislative, and judicial branches. In the last decade the growth and evolution of computer-related services has been particularly rapid. The state's data processing expenditures, according to Governor Brown's Executive Management Commission, are now growing almost twice as fast proportionately as the total state budget.

Governor Ford's decision in 1973 to centralize computer hardware has contributed to this growth. By creating a centralized "utility" concept, whereby computer power is made available to any agency that might demand it, two major events resulted.

1. An overall lack of administrative control over the demand for computer services, and
2. A unique state-of-the-art computing facility was established that has attracted nationwide attention.

The newly created Bureau of Computer Services (BCS) was given the responsibility to provide and operate the state's computer hardware resources and facilities in a centralized location. It was not given the authority to regulate the demand for data processing, nor was it responsible for providing software or systems development services.

One of the main reasons Governor Ford chose to centralize computer services was that large amounts of money were being spent by different agencies for similar types of computer hardware. Computer software was not that big an expense at the time. This has changed, however, especially in the last five years. Now computer software is becoming the primary expenditure as more and more money is required to develop larger and more sophisticated software systems.

This situation and the management problems surrounding it were recognized by the Brown administration. The proposed solution was a new Department of Professional Support created within the Personnel and Management Cabinet. The new department was designed to centralize personnel engaged in systems development and related activities throughout various state agencies. Governor Brown's Executive Management Commission held that centralization should lead to better use of data processing personnel in meeting the collective needs of state government, as well as the individual needs of agencies.

Another reason given for the reorganization was the need to reduce or eliminate expenditures on contractors and consultants for software and systems development work. Reallocation and prioritization of personnel resources was expected to result in more in-house development, with a resulting reduction in the need for outside assistance.

It is the amount of money being spent on consultants for systems development

work that attracted the attention of the Personal Services Contract Review Subcommittee of the Legislative Research Commission. This Subcommittee has been reviewing the need for computer services contracts as part of their regular oversight duties. The Subcommittee's high opinion of the state's hardware facilities, coupled with their knowledge of problems with some of the systems development consulting contracts, led them to request the Program Review and Investigation Committee to determine why systems development that is presently being contracted for could not be better and more cheaply accomplished in-house.

The Committee for Program Review and Investigation voted to approve a preliminary review of computer services contracts on September 24, 1980. Major objectives of the study were to:

- determine responsibility for data processing activities in state government;
- describe the nature of computer services contracts;
- analyze why state agencies contract for services; and
- determine whether the Bureau of Computer Services could perform the systems development work presently being contracted for in a more efficient and economic manner.

The objectives have been accomplished by interviewing state personnel having responsibilities relating to computer services and computer services contracts, reviewing individual computer services contracts on file in the Department of Finance, identifying all statutory and regulatory authority relating to data processing in state government, and reviewing the data processing personnel classification and salary structure.

Since this study was initiated, the executive branch has reorganized responsibilities for data processing. The Personnel and Management Cabinet has been created, which, in addition to the Office of Program Administration and the Kentucky Employees Retirement Systems, consists of four major departments: the Department of Personnel, the Department of Technical Services, the Department of Professional Support, and the Department of Training. Data processing responsibility is divided between two departments. The old Bureau of Computer Services, now renamed the Department of Technical Services, remains responsible for the centralized computer hardware facility. The new Department of Professional Support has responsibility for overall systems development work and those technical services that are typically provided by data processing personnel rather than data processing machinery. The goals and objectives of the new cabinet and its departments are included in Appendix B.

Interviews with the Secretary of the Personnel and Management Cabinet and the commissioners of the Department of Technical Services and Department of Professional Support reveal an interest in developing in-house capability and minimizing contractual arrangements. However, this orientation is complicated by many factors. Difficulties exist with the large backlog of systems development work required by individual agencies, the need for statewide data processing systems, the existence of off-the-shelf packages that can

be purchased at a significant savings over in-house development, and finally, the sheer inertia that must be overcome in a major organizational change of this nature.

For the purposes of this review it is important to understand the difference between hardware and software. Hardware, as its name implies, is equipment used for data processing. Included are such items as computers, mini-computers, micro-computers, key punch machines, cathode ray terminals (CRTs), tape drives and disc packs.

Software can be generally defined as the detailed instructions that tell the computer what you want it to do. It therefore includes the development of computer programs as well as their maintenance. In the broader sense, software is defined by B. Boehm as a dynamic process with a life cycle consisting of the following steps and activities:

- System requirements
- Software requirements
- Preliminary design
- Detailed design
- Code and debug
- Test and pre-operation
- Operation and maintenance

As such, software is more than just a computer program or the process of design. There is further discussion of software and data processing as they relate to computer services contracts in Chapter III.

It is useful to note that hardware and software have a similar product cycle. The basic elements of each include design, development specifications, manufacturing, sales and support, implementation, training, user support, and maintenance. One important disparity between hardware and software is that the life cycle of software far outstrips that of the machine it was intended to run on. Naturally, this fact has an impact on its value, and raises numerous issues related to investment value, tax treatment and proprietary controls.

Whereas hardware is relatively easy to define, quantify and measure the benefits of, software is not. Software reliability and results are difficult to quantify and seemingly impossible to control. As Fredrick Brooks observed in *The Mythical Man-Month*, one of the basic problems with software development is the difficulty of estimating the size of a proposed project. This industry-wide problem has cropped up on more than one occasion in state government as systems development projects have foundered due to unforeseen needs and difficulties.

The chapter which follows describes the growth and organization of responsibility of data processing in state government. Next is a chapter describing the nature of computer services contracts, which attempts to categorize the different kinds of contracts, followed by a chapter describing the primary reasons why agencies contract for computer services. The final chapter includes a major conclusions section.

CHAPTER II

GROWTH OF DATA PROCESSING IN STATE GOVERNMENT

Data processing, like most emerging activities in government, started out decentralized. Many agencies owned and operated their own computers. The duplication and expense of these individual operations started to attract attention in the mid-1960's. Wasted computer capacity and projections of higher future costs caused a House Resolution to be passed in the 1966 General Assembly, requesting a study of the practicality of establishing a unified computer data processing system for state government. At that point, most people were concerned over the high cost of computer equipment and the need to maximize the efficiency and effectiveness of data processing operations. At the same time they were also excited about the possibility of the Commonwealth possessing information systems that would tell anybody anything about everything.

The study requested by the General Assembly resulted in a comprehensive LRC report entitled "ADP in Kentucky State Government," published in November, 1967. The report surveyed the ADP operations in the federal government and other state governments and concluded, among other things, that a coordinating function should be established within the Department of Finance, and that agency needs could be met by a computer service center. It also concluded that the nationwide shortage of data processing personnel, as well as the fact that Kentucky state government salaries for many of the data processing classifications were approximately seventeen percent below regional industry averages, was making it extremely difficult to attract and retain qualified personnel.

In May 1968, Governor Nunn's Kentucky Efficiency Task Force published its report and recommendations based upon an evaluation of executive branch agencies and programs. The report acknowledged the LRC study and agreed with its findings. The Task Force thought it imperative that an overall central authority be created, within the Department of Finance, to oversee accounting and data processing functions. However, they stopped short of recommending the establishment of a single data processing facility. Instead, they suggested a policy of limited centralization of data processing through the development and operation of data centers located in the major office buildings in Frankfort. The Task Force did not have the time to conduct an in-depth study, nor did it address the subject of personnel.

Meanwhile, however, the General Assembly had passed SB 333 in March 1968, sponsored by Senators Downing and Van Hoose and suggested by the Department of Finance, for the primary purpose of streamlining the Commonwealth's financial management procedures. SB 333 also contained what was to become the key statutory definition and cornerstone of responsibility for data processing in state government. Codified as KRS 42.030(1)(j), it gave the Department of Finance the administrative control over "coordina-

tion and supervision of data processing, computers, and government information systems.”

The intent of this definition was to reduce the level of confusion and conflict between the Department of Finance and other agencies about who was ultimately in control of computer equipment purchases. It was also intended to neutralize the efforts of computer vendors who were profiting from this situation.

Notwithstanding the particular purpose of the legislation, the language was open to interpretation and has subsequently been used to further certain arguments. Some thought it called for a centralized computer facility; others thought that the Department of Finance was also responsible for data base control, systems development, and programming.

Governor Nunn ultimately moved towards implementing some of the recommendations of his Efficiency Task Force. He tried to develop a Kentucky Management Information System, under the direction of the Department of Finance in 1971. This system was a major attempt to coordinate computer usage and management information throughout state government. Numerous consultants were employed, under the direction of Carl Pallo, himself a consultant, to produce a comprehensive design. In his proposal to the Governor, Mr. Pallo observed that the state was smothering itself with sophisticated hardware too advanced for the software running it. This situation was compounded by having too few competent programmers “trying to fit together an impossible jigsaw puzzle composed of inadequate, impotent, and inbred software carried over from an extinct age.” He emphasized that there were four typical problems that had to be combated immediately:

- hardware proliferation;
- backroom programming;
- separate systems; and
- open-ended consultant contracts.

However, nothing of an organizational or procedural nature resulted from these recommendations. In April 1973, Governor Ford issued Executive Order 73-425, establishing the Bureau of Computer Services (BCS) within the Department of Finance. In a news conference announcing the reorganization, attention was drawn to the increased costs associated with individual agency acquisition of computer hardware. Savings resulting from the creation of BCS were a projected \$5 million a year. Decentralization was blamed for:

- a lack of quality agency application system development;
- limited sharing of information among departments;
- absence of universal applications; and
- extensive use of consultants.

In charging the Bureau with responsibility for managing a central computing center that would ultimately serve all state agencies, the following advantages were listed:

- better utilization of personnel and computer hardware;
- vehicle for integrated management systems;

- cost saving and cost avoidance;
- coordination among agencies;
- better space and facilities utilization; and
- limited use of consultants.

Unfortunately, the legislation that resulted from this Executive Order, KRS 42.014(2), did no more than establish a Bureau of Computer Services, without further defining its role over and above that previously established by KRS 42.030(1)(j) in 1968. In addition, the responsibility for KRS 42.030(1)(j) was then split within the Department of Finance. Management information systems were the responsibility of the Bureau of Financial Management Systems, whereas data processing and computers were the responsibility of the new Bureau of Computer Services. This situation, as well as the lack of definition within the statute, contributed to continuing confusion over responsibilities in the areas of:

- agency application development and data control;
- centralized systems development for universal applications; and
- centralized planning staff.

These three areas were not included within Executive Order 73-425 as specific organizational units that would result from consolidation and centralization of state government data processing functions.

Governor Carroll found it necessary, on May 6, 1976, to issue a memorandum to Cabinet Secretaries and other governmental officials pointing out the necessity for the Department of Finance to "provide the basic direction for computer usage in the Commonwealth. This is especially true where data processing activities might require the acquisition of new equipment or proprietary computer programs." The memo directed that "outside services such as consultants or computer manufacturers" were "to be contacted only after the Department of Finance . . . indicated the advisability of that action."

An accompanying memo from Russell McClure, Secretary of the Department of Finance, explained that the department would play a more active role in providing direction and reviewing activities in the data processing area. In this memo, state agencies were asked not to involve themselves with consultants or with computer manufacturers until the Bureau of Computer Services had reviewed a project and indicated that to be the best course of action. It instituted a "Request for Computer Service" mechanism to provide documentation for the procurement of computing equipment or proprietary computer programs, as well as software development, research and development, or other support activities. Both the memo from Governor Carroll and the memo from Secretary McClure were in accordance with certain principles promulgated by the Bureau of Computer Services for the purpose of executing the Department of Finance's responsibility, as mentioned in KRS 42.030(1)(j).

These principles, called foundation principles, are not regulations, since the statutes do not specify that regulations are required in this area, but rather administrative policy reflecting upon broader powers granted to the Department of Finance by the legislature. Foundation principle number 1, relating to consolidated hardware, maintains

that "it is the state policy to maintain centralized management of computing resources, primarily to realize economies of scale and to facilitate inter-agency data base management and network potential." Foundation principle number 2 clearly states that agencies using computer services provided by the Department of Finance shall be responsible for:

- applications software development;
- data preparation;
- data control;
- job initiation; and
- output dissemination and related functions.

Although increased coordination and oversight has been exercised in the recent past by the Department of Finance in these areas, there is no real evidence of better control or more cost-effective provision of computer-related services.

The Bureau of Computer Services has concentrated on building a state-of-the-art computing facility that operates, as originally intended, a quasi-electric utility that an agency can plug into when it needs computer "power." Individual agencies have remained responsible for their own applications or systems development, whether they be developed in-house or procured by contract. Since the Bureau of Computer Services did not have the authority to provide the manpower required to develop the software for systems applications, agencies had little choice but to retain consultants or employ and train their own staff. For the most part this arrangement seemed to have been acceptable, if not promoted, by the agencies.

In April 1977, Governor Carroll issued an Executive Order that upgraded the internal structure of the Bureau of Computer Services as presently defined in KRS 42.026. However, this action did not further define statewide responsibilities, nor did it clarify some of the confusion that had existed since Governor Ford's reorganization.

In September 1980, Governor Brown's Executive Management Commission published its findings and recommendations. Its analysis of state data processing operations concluded that no single governing body or individual had administrative control over statewide data processing expenditures, planning, or administration. It pointed out that Kentucky is one of only four states that have elected to organize with a central "utility" concept. Most other states have centralized other functions in addition to the computers. The Commission, therefore, made numerous recommendations toward the goal of ultimately centralizing all data processing functions within state government.

The Management Commission observed that the typical approach used by state agencies to develop new application systems is one of creating rather than purchasing. The Commission was of the opinion that in-house development is more expensive than purchasing existing applications. Even though they usually need modification, off-the-shelf applications cost less and can be implemented in a shorter time.

The Commission's major complaint about use of outside consultants concerned lack of planning and management within state government aimed at controlling the quality and level of consultant productivity. In the course of their investigation they discovered a

lack of management understanding of data processing. They pointed out that computerized information systems and data processing are no longer a support function, but an integral part of the management process, like fiscal and personnel matters. The Commission identified three typical reasons why agencies retain consultants:

- project management skills that are solely lacking elsewhere in state government;
- specific technical training that is lacking within state agencies; and
- supplemental staff as required to meet peak resource requirements.

On January 20, 1981, Governor Brown issued Executive Order 81-112 to implement some of the recommendations of the Management Commission. Specifically, he removed the Bureau of Computer Services from the Department of Finance, renamed it the Department of Technical Services, and placed it within the newly created Personnel and Management Cabinet. Additionally, and most importantly, he created a new Department of Professional Support, also within the new cabinet. The department has overall responsibility for the "softer" elements of data processing, such as providing management analysis and data processing design services to state agencies. The Department of Professional Support is intended to be a centralized in-house consultant group that can attract and retain highly qualified people in the systems development field. This is a goal that individual agencies have had difficulty in attaining. If the department is successful in this endeavor, progress will be made in "catching up with the hardware," a problem that Carl Pallo identified ten years ago.

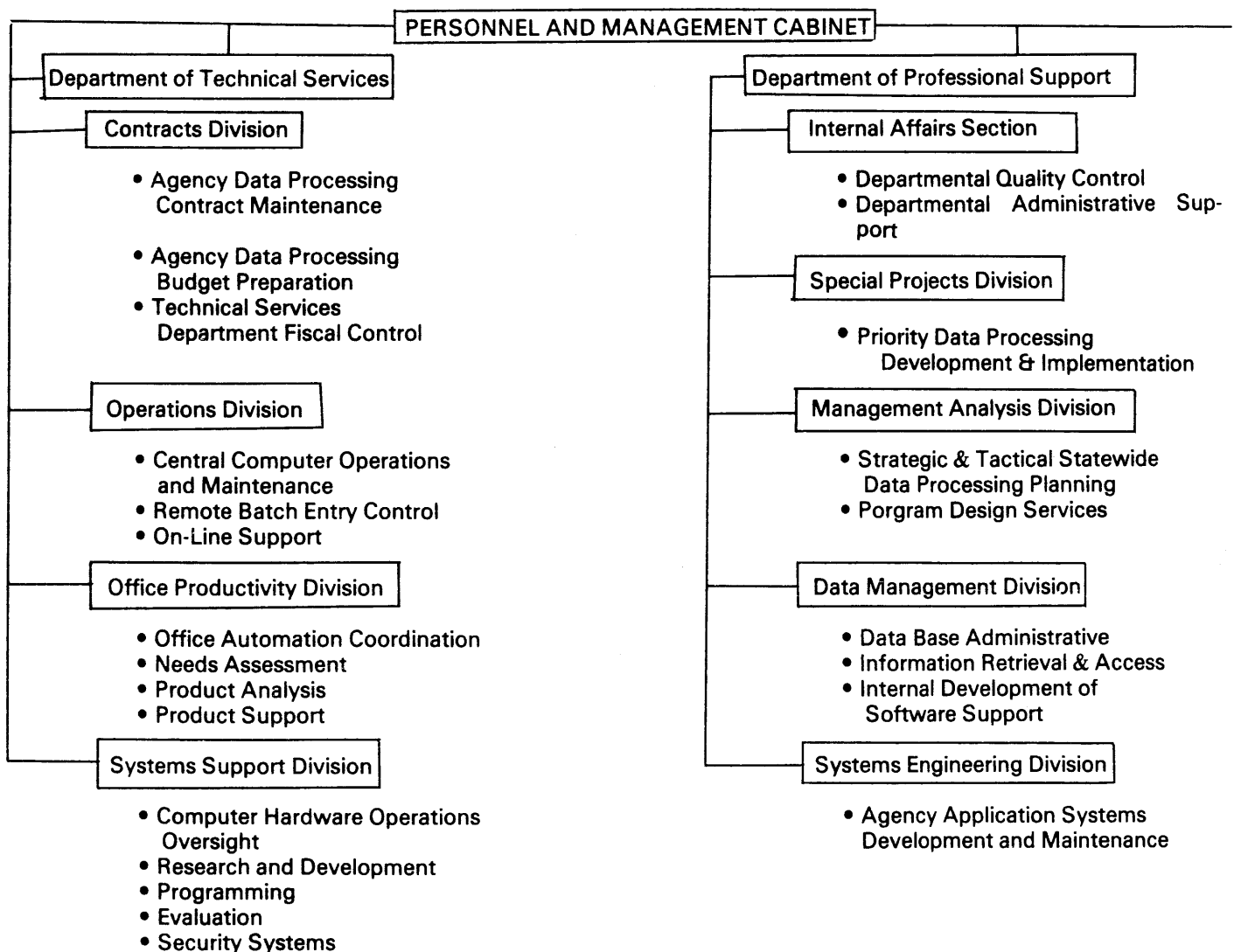
Figure 1 outlines the basic responsibilities of both the Department of Technical Services and the Department of Professional Support. The other departments and offices within the Personnel and Management Cabinet are not included because they are not directly concerned with data processing.

The foregoing history shows a consistent awareness over the last sixteen years of problems related to the lack of coordinated authority over such activities as systems development and contract management. It is also apparent that the creation of a centralized computing facility with no attendant controls on systems development has created an environment for the proliferation of differing but similar applications, i.e., six different payroll systems. One must conclude that Governor Brown's decision to combat these problems by placing explicit authority for managing them in a new department is both necessary and overdue.

One of the anticipated results of centralization was a reduction in consulting contracts. Such may not be the case, either in number or dollar amount, due to the commitment by the Brown administration to implement certain statewide data processing systems that have long been recognized as needed, such as a single personnel/payroll system and a unified accounting system. Coupled with overall systems needs there is a monumental backlog of individual agency systems development work that the new department has fallen heir to. Some of these systems needs have been large, unresolved problems for agencies in the past, i.e., the Medicaid Management Information System (MMIS) that the Department for Human Resources has been trying to develop since 1974.

The sheer size of the statewide projects and the number of old and new projects in the agency backlog has put a lot of immediate pressure on the new agency at a time it is least able to handle it. The data processing professionals who have been working for individual state agencies in a variety of capacities are in need of considerable reorientation and retraining, especially if they are to be promoted into new jobs. There is already a shortage of data processing project and program managers, and high level systems professionals. Hiring these individuals at adequate salaries will be difficult until the data processing personnel classification system is modified to accommodate these new skill needs. In the past, agencies controlled what priorities they placed on systems development and could either hire their own personnel or contract the job to a consultant. If the job was not completed, it was their responsibility. Now, if the program does not get designed or the application system is not developed, the fault can be placed on the Department of Professional Support.

FIGURE 1



SOURCE: Executive Order 81-112

CHAPTER III

DESCRIPTION OF COMPUTER SERVICES CONTRACTS

The purpose of this chapter is to describe the nature of the Commonwealth's computer services contracts and point out meaningful categories, comparisons, and trends. State agencies acquire a variety of computer services through the mechanism of personal services contracts. Leasing or purchase of data processing equipment is accomplished through regular state procurement procedures. All personal services contracts for computer services were examined for the four-year period from FY 1977-78 through FY 1980-81 to determine:

- clients and contractors;
- categories of contracts; and
- number and value of contracts.

Clients and Contractors

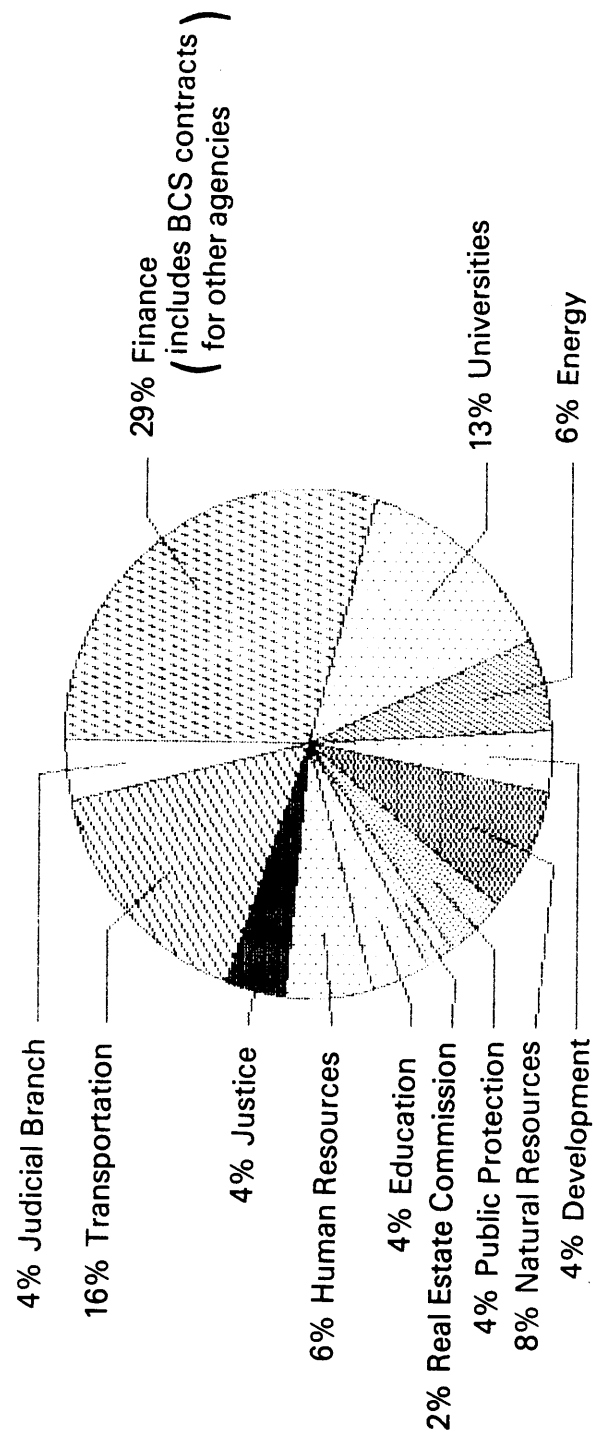
The distribution of state agencies contracting for computer services in the last four fiscal years is illustrated in Figure 2. The Department of Finance has arranged for the largest number of computer services contracts because it has acted as an umbrella agency for several smaller agencies for which it is responsible. The agency with the largest number of these contracts is the Bureau of Computer Services. The BCS contracts were not to aid BSC itself, but other agencies that needed services that BCS was not chartered to provide. The remainder of the contracts are nearly equally divided, in terms of percentage, among various state agencies. Institutions of higher education account for the next highest number of contracts, with sixteen percent for the combined period FY 1978-81.

Figure 3 lists the thirty-one firms with which the Commonwealth has contracted from FY 1978 through 1981. In this time period, two firms, Cybernetics and Systems, and McDonnell Douglas received almost forty percent of the dollars spent on contracts.

The Commonwealth has contracted for computer services from coast to coast, as can be seen in Figure 4. Approximately fifty percent of the contracts are to organizations that are based in or have an office in Kentucky. Louisville firms receive almost forty percent of the Commonwealth's contracts, with Lexington and Frankfort receiving eight and four percent, respectively, over the four-year period from FY 1978 through 1981. The other contracts are reasonably well divided between firms located in fifteen other states.

FIGURE 2

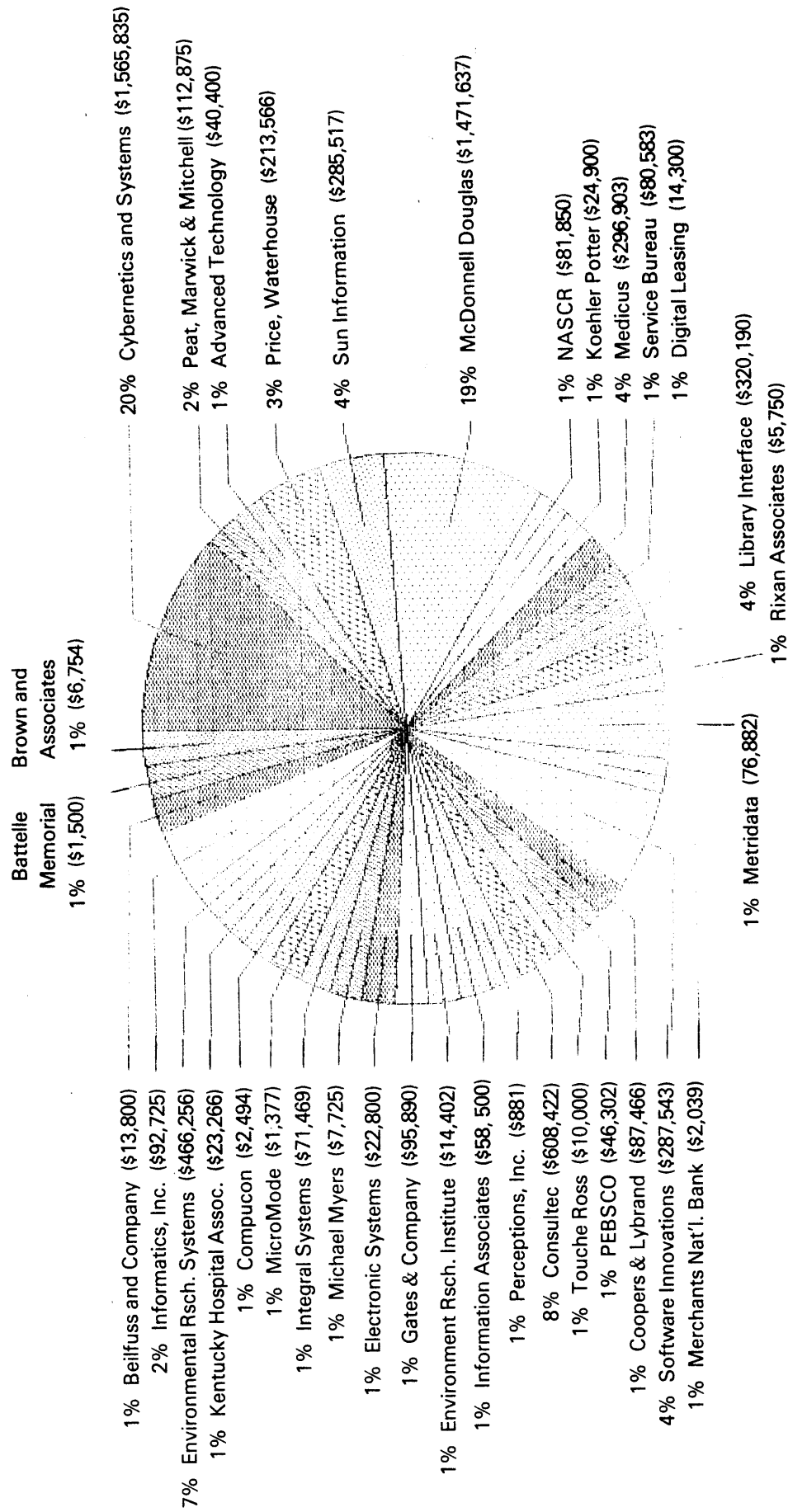
PERCENTAGE OF CONTRACTS PER AGENCY
FY 1978-1981



SOURCE: Department of Finance

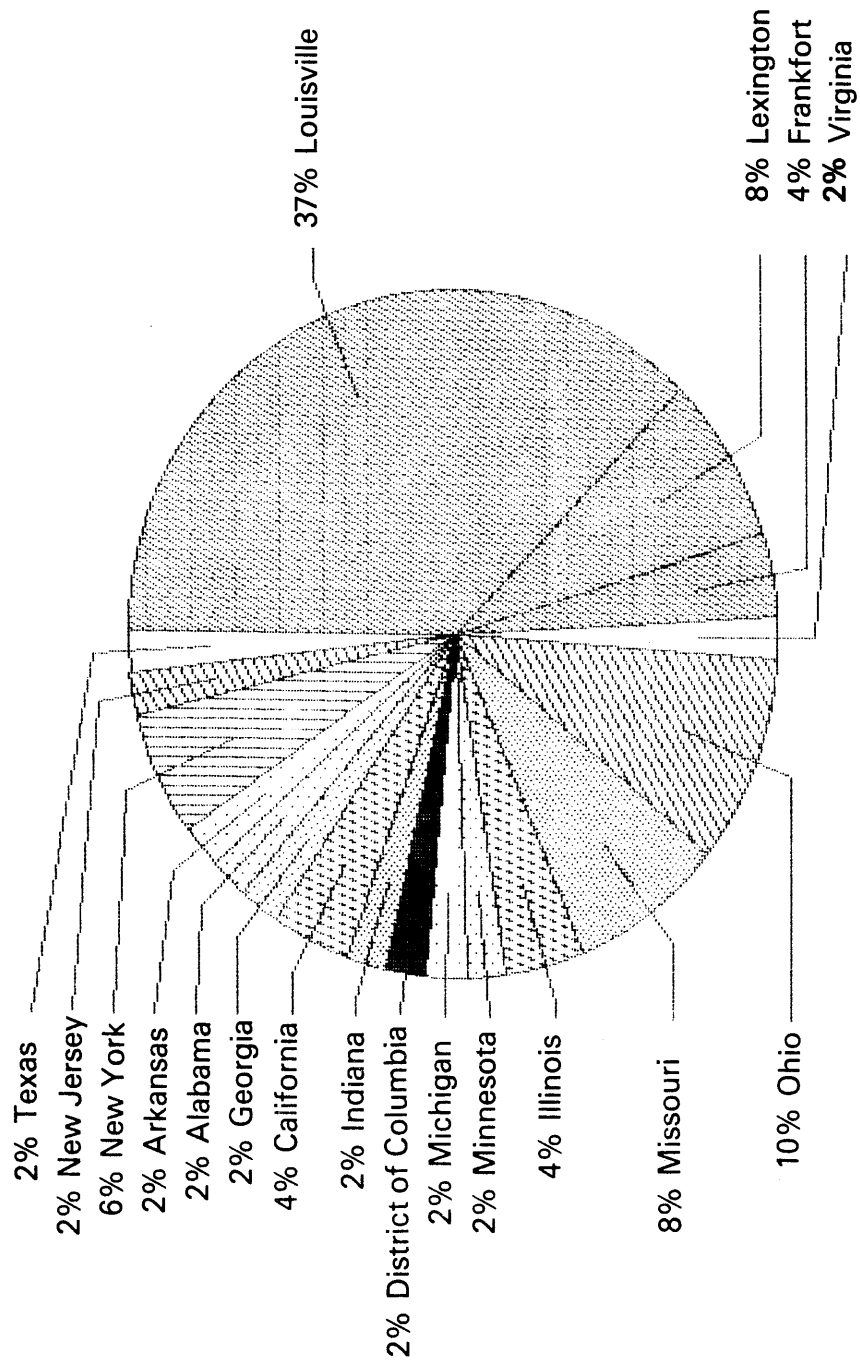
FIGURE 3

CONTRACTORS & DOLLARS RECEIVED
FY 1978-1981



SOURCE: Department of Finance

FIGURE 4
LOCATION OF CONTRACTORS
FY 78-81



SOURCE: Department of Finance

Categories of Contracts

The personal services contracts on file in the Department of Finance can be divided into many categories. For the purposes of this review, three basic distinctions are defined:

- Applications systems software;
- Data processing; and
- Equipment and other.

Applications systems software is what most people term “software” or systems development work. It includes a wide range of generalized applications and packages that are employed for such things as a unified accounting system, a geographic information system or a Statute Information and Retrieval System (SIRS). Some of this software is ready-made, in the sense that the basic product, an accounting system, for example, can be purchased and then applied to a particular situation with few, if any, modifications. Purchasing off-the-shelf packages spreads the development and maintenance costs of the software over a broad set of users. It also creates a collective interest and commitment that helps keep the system up-to-date and relevant.

Considering the amount of personnel experience and learning that goes into the development of large and complex applications systems, it would be wasteful duplication to develop an in-house system similar to what had been developed elsewhere. Governor Brown’s Executive Management Commission observed that Kentucky’s state agencies often create their own systems despite the increased costs. The National Association of State Information Systems (NASIS), in its 1980-81 Report on Information Systems Technology in State Government, reiterated its stand “that the savings that can occur through transfer (of already developed systems) consist of both time and money—oftentimes substantial amounts.”

More often than not, the rule in the past has been to develop software from scratch. Tailor-made systems are usually difficult to transfer to other similar applications. More importantly, however, they are significantly more expensive in that development costs are all borne by a single agency. The rationalization for tailor-made systems is often that programmers are already on the payroll; moreover, it is easier to have them develop the system than it is to go through often lengthy and complicated contracting procedures. Furthermore, staff costs are usually not tracked closely, which means that in-house development costs usually appear lower than they actually are.

Another factor that adds to this general confusion is that neither the Department of Finance’s Standard Contract for Personal Services form (B 111-11, revised March 1981) nor the Legislative Research Commission’s Personal Services Proof of Necessity form requires an estimate of man-hours needed to complete a job. Such an estimate is necessary before projected costs of external development can be compared to those for internal development. This information gap should be filled so that management can determine when it is cost-effective to contract.

RECOMMENDATION

The Department of Professional Support should require all computer services contractors to submit estimates of manpower, by job classification and billing rate, necessary to do the work specified.

Data processing is what the term implies: processing data. Contracts falling into this category are often regular report production work for a small agency that turns its raw data over to a data processing service agency. It would be more costly to employ additional staff and buy the peripheral equipment necessary to tie into the central computers. Equipment and other is the category used for contracts that are required due to not having necessary or sufficient computer related hardware.

Number and Value of Contracts

Despite the tremendous growth in data processing, both in the private and public sector, the number of computer services contracts for the Commonwealth has not increased much, on average, in the last four years. Figure 5 shows that there were eleven contracts in FY 77-78, twenty-four contracts in FY 78-79, and fifteen contracts in both FY 79-80 and 80-81. These numbers do not include amendments but do reflect the contracts in effect each year, regardless of whether the contract was new or a continuation from the previous year. A majority of contracts do carry over from year to year. Often a company will contract for a specific job, and necessity will provide that it be carried over into the next fiscal year, either because the job required more time than anticipated, or because it is of a continuing nature (i.e., data processing work). In many of these cases, a continuation of the previous contract is entered into and any monies remaining from the previous fiscal year are carried over.

Together with the number of contracts let per year is the projected cost incurred per year. Figure 6 represents the total of contract amounts for computer services contracts in each fiscal year from FY 1978 through 1981. The actual dollars spent are usually close to the projected cost for any fiscal year, even if all the work is not completed. Few contracts end up costing less than the projected amount. Most cost more but the additional costs are typically incorporated into a new or continuation contract the following year; thus for illustration purposes it works out about the same. Projected costs were used in Figure 6 primarily because actual expenditures are not available yet for the last quarter of FY 1981 or for a contract where a dispute about the amount owed exists. In FY 1978 the total was \$1,141,554 for eleven contracts. In FY 1979, \$1,916,177 was spent for twenty-four contracts. Fifteen contracts were let for both Fiscal Years 1980 and 1981, for a projected cost of \$1,621,583 and \$1,364,907 respectively. These figures represent the amount contracted for and approved by the legislative Personal Services Contract Review Subcommittee, although contract amounts are often amended to allow for increases or decreases. As in the case of numbers of contracts, the average projected cost of contracts has remained at a

relatively constant level, though there was a decline in volume of about half a million dollars from FY 79 to FY 81.

Funding for contracts comes from several different sources. As Figure 7 shows, almost a third of funding for computer services comes from the federal government. The amount of federal funding varies from contract to contract; some are made up of ninety percent federal dollars and others as little as ten percent. Federal monies account for approximately \$1.8 million of the nearly \$6 million used for contracts between FY 1978 and 1981. Agency funds are differentiated from trust and agency funds. However, agency funds and funds belonging to institutions of higher learning, even though in some cases they are made up of agency receipts, can be considered as General Fund money, since they are all appropriated to the agencies by the General Assembly. The percentages for Figure 7 were calculated from the categories of funding sources noted on the Proof of Necessity (PON) forms of each contract.

FIGURE 5
NUMBER OF COMPUTER SERVICES CONTRACTS
FY 1978-1981

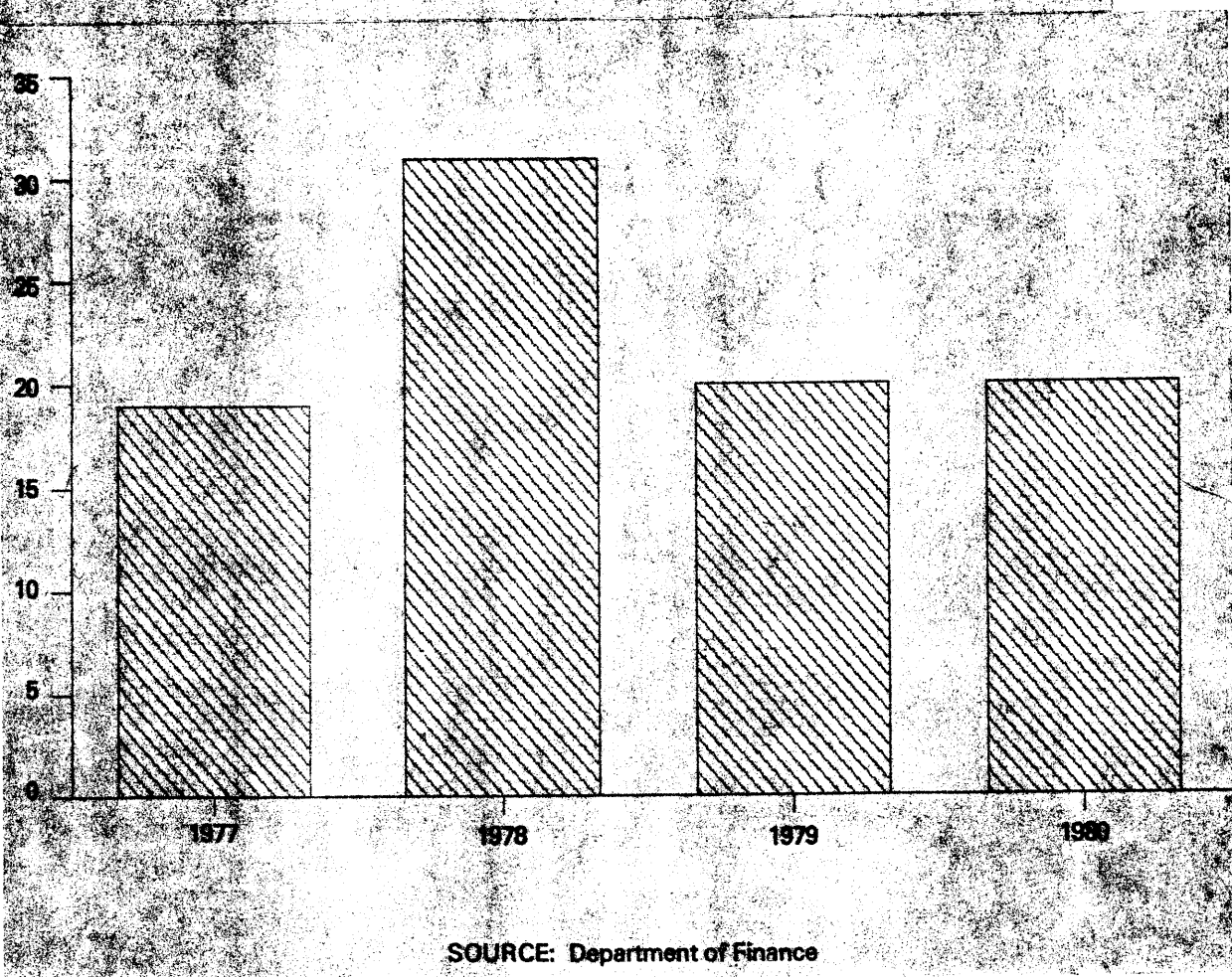
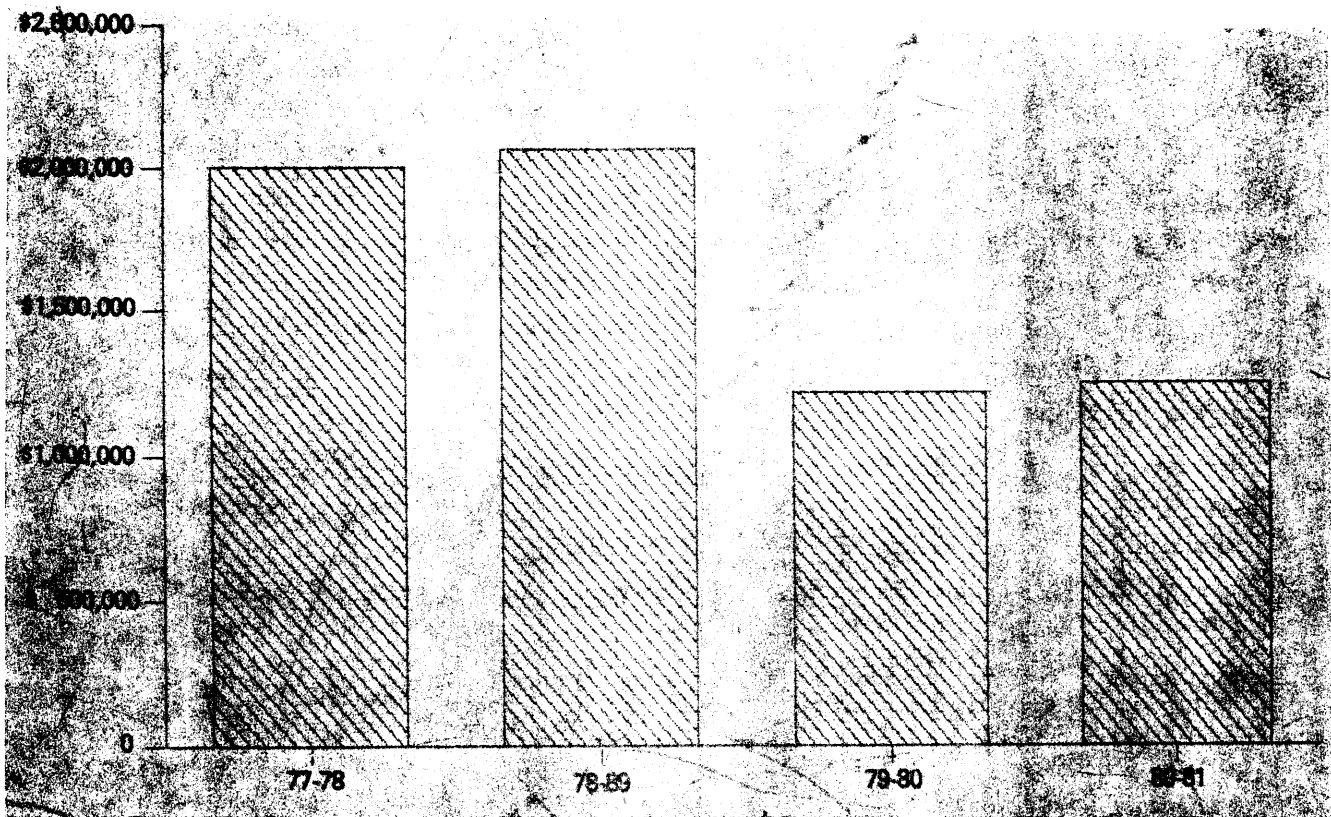


FIGURE 6

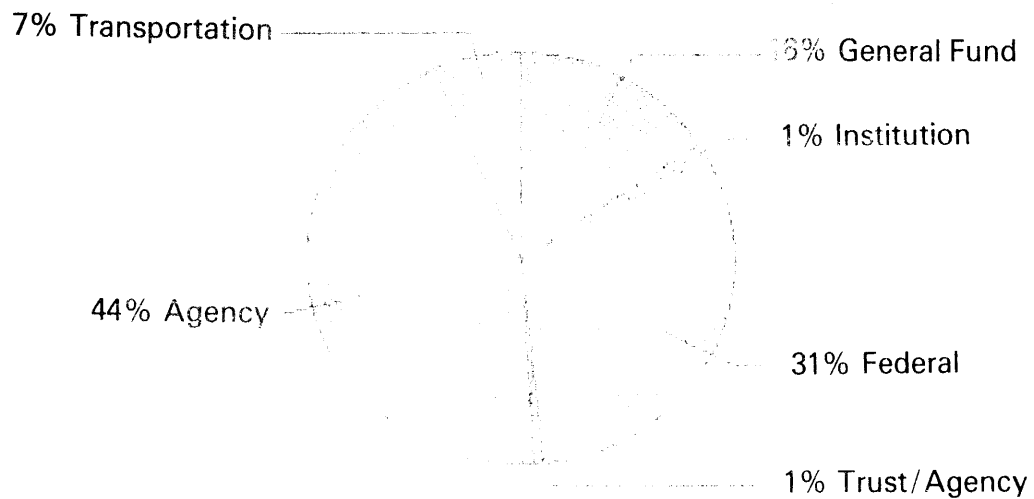
COST OF COMPUTER SERVICES CONTRACTS
FY 1978-1981



SOURCE: Department of Finance

FIGURE 7

FUNDING SOURCES FOR COMPUTER SERVICES CONTRACTS
FY 1978-1981



SOURCE: Department of Finance

CHAPTER IV

WHY AGENCIES CONTRACT FOR COMPUTER SERVICES

The decision to contract for computer services is made by management and is usually a result of certain constraints that the manager and his organization face. The four major constraints are time constraints, staff constraints, equipment constraints, and ownership (proprietorship) constraints. These reasons are described generally below, followed by an analysis of actual reasons cited on individual contracts from FY 1978 through FY 1981.

Time Constraints

Agencies sometimes have to develop data bases or computerized systems within a short time frame to comply with requirements of state or federal laws and regulations. These developmental efforts often require the services of relatively scarce and highly paid workers who are not typically found on state government payrolls. Hiring temporary workers of this type and caliber is exceptionally difficult under the restrictions of the state merit system. Without the existence of a well-qualified group of project programmers, managers, and systems analysts that can be applied to these temporary and intensive projects, many managers feel it is more cost-effective to contract for this kind of work.

Many systems development projects in state government are funded through federal grants with specific and usually short time limits. A typical example would be a fiscal year-end grant that must be obligated or expended by a state agency within a few months. Under these circumstances an agency would not have time to locate, employ and train the required personnel within the deadline. Without the ability to contract for this work, agencies would lose significant amounts of funding and many useful projects could not be completed.

Staff Constraints

The existing merit system classifications do not allow competitive salaries for many of the key personnel required to design computer systems and develop necessary software. According to many national surveys by Fox-Morris Personnel Consultants and others, there is a tremendous demand for programmers and systems analysts in the private sector. This circumstance has created a growing disparity between private sector and state government salaries.

Systems development work often requires unique expertise that is difficult to obtain even in the private sector. Certain state-of-the-art applications in new areas of systems technology, language generators, and computer graphics, for example, are in short supply.

Without the ability to obtain this expertise through contracts the state would probably have to take a more traditional approach to data processing applications.

Equipment Constraints

Although it has been observed that Kentucky state government possesses some unusually sophisticated computer hardware, primarily located within the Department of Technical Services, there are limitations. Some, perhaps many, systems development efforts are hampered by the unavailability of state hardware. For example, because the computer world is undergoing tremendous growth and change, it is virtually impossible to keep up with, let alone acquire, all the technical innovations that are marketed. Also, even if the state owns or leases the necessary equipment, it may be tied up, due to previous commitments or priorities. Another example is the short supply of computer digitizers that help build geo-reference data bases. Additionally, a major problem is the response time constraints caused by the day-time load placed upon the central computer facilities. This situation results from the great number of state government video terminals which all “plug in” to one major facility. In many cases, it is less costly and more efficient to employ a micro or mini computer for some applications rather than use the hardware maintained by the Department of Technical Services. On the other hand, however, buying quantities of specialized equipment would often not be efficient or cost-effective, especially if it is likely to become obsolete. The contract mechanism is once again useful in these instances.

Ownership Constraints

In some cases the data that is necessary for a particular systems application has been digitized (put into machine readable form) by a contractor but has not been digitized by the agency in need of it. For example, the Legislature, the Attorney General’s office, and other state agencies have a need to search through court cases as they may apply to their research on current problems and questions. If a private organization has already digitized this information for computer search and retrieval it is more efficient to contract to use their data than to spend the time and money to duplicate and maintain the information in-house. In one case six state agencies share the yearly cost of such a service.

Purpose and Reasons for Contracts

There is usually a relationship between the purpose of a contract and the reason a contract is necessary. Typically something needs to be accomplished that requires outside assistance.

The Department of Finance manages the personal services contract process for all state agencies. As part of necessary documentation under KRS 45.710, the Legislative Research Commission requires a Proof of Necessity (PON) form, to be completed by the

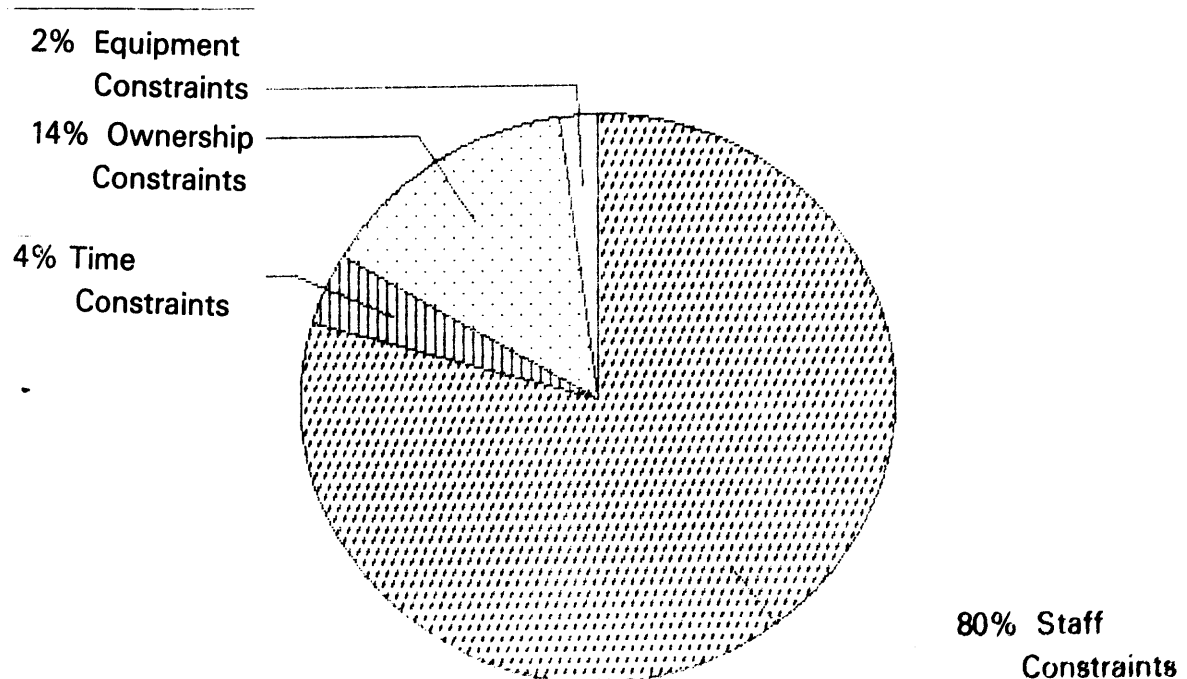
agency requesting the contract. Versions of this form have been in existence for some years. Those used by the Department of Finance in FY 77-78 (Form B-111-26, revised March 18, 1977) required justification for work to be performed by an outside firm. The current form was revised by the LRC in June, 1981, to accompany the Department of Finance's new Standard Contract for Personal Services (Form B-111-11, revised March, 1981).

The presumption behind a personal services contract has always been that state personnel are not available to perform the needed services or that for some reason it is not feasible to use state personnel. Since many factors can influence the decision to contract, the justification of this presumption is a requirement on the PON form.

The various justifications cited by agencies on the PON forms for computer service contracts have been reviewed, analyzed, and grouped into categories that match those described in the first part of this chapter. The results for FY 77-78 through FY 80-81 (Figure 8) show that eighty percent of contracts are a result of staff constraints.

FIGURE 8

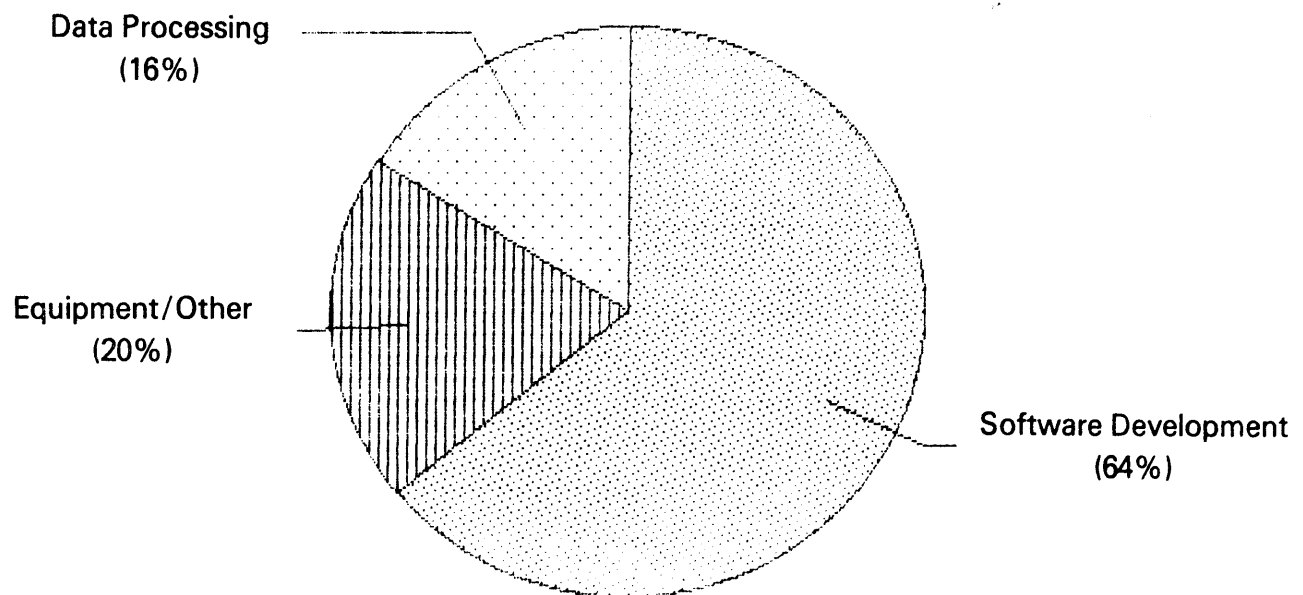
**MAJOR REASONS FOR COMPUTER SERVICES CONTRACTS
FY 1978-81**



SOURCE: Department of Finance

Averaged over fiscal years 1978 through 1981, over sixty percent of computer services contracts are for software or systems development work. (See Figure 9). The rest of the pie is divided almost equally between data processing work and "equipment/other." Nearly all the contracts in the equipment/other category are for data base development. Most of the "data processing" category contracts are small; many are long-standing.

FIGURE 9
PURPOSE OF COMPUTER SERVICES CONTRACTS
FY 1978-1981



SOURCE: Department of Finance

The software contracts are made up of all sizes and types. A large portion of the dollar value of this category is made up of the open-ended contracts that the Bureau of Computer Services entered into for the purpose of providing systems development assistance to other agencies.

Applications Systems Software

Agencies have tried to hire individuals to develop their applications but have been hampered by a national and regional shortage of computer professionals. The demand for programmer/analysts and data processing management personnel has been growing and will continue to grow. Tom Lutz, Education Director for ITT's Software Technology Center, said recently that the United States' demand for programming talent totaled

roughly 250,000 individuals, and by 1985, the figure is expected to rise more than threefold to 800,000. National Personnel Associates, in a recent survey, listed computer personnel at the top of employers' most wanted list. Fox-Morris Personnel Consultants, Inc., in a mid-1980 survey, found that overall demand for data processing personnel rose 18.7 percent above that in 1979. This kind of demand has created high salaries and a declining level of technical competence, as desperate employers hire systems people who are basically unqualified for the work to be done.

The Commonwealth finds itself unable to compete in this market, except perhaps at the entry level. For example, on April 30, 1981, the number of individuals available for employment on the Department of Personnel registers for the Programmer/Analyst series was as follows:

Programmer/Analyst I - 52

Programmer/Analyst II - 5

Programmer/Analyst III - 2

Programmer/Analyst IV - 3

As can be seen, there is no shortage of people who want to work and are qualified to be a Programmer/Analyst I. However, there is a dramatic difference at the other three levels. Obviously, not too many people are willing to work for the salaries the state pays for these positions. Statistics on applicants taking the Department of Personnel tests for the Programmer/Analyst series over the past two years tell the same story.

Programmer/Analyst I - 412

Programmer/Analyst II - 36

Programmer/Analyst III - 16

Programmer/Analyst IV - 11

Again, it can be seen that many people are interested in joining the state at the entry level, probably because other potential employers will not hire them without any experience in programming. Individuals who have some experience in programming and/or analysis are obviously not as interested in working for the state, since not many have even taken the trouble to take the merit test. The situation tends to worsen as one goes higher up the ladder. Only eleven individuals took the test for Programmer/Analyst IV over a two-year period.

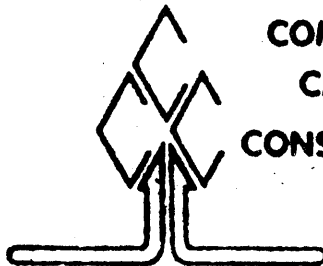
These facts are not surprising when one considers that the entry level salary for a Programmer/Analyst IV was \$15,280 per year before the recent 10% upgrade on June 16, 1981. Even the new entry level salary of \$16,860 does not compare well to the advertised salaries of \$24,000 to \$34,000 that appear regularly in *The State Journal* and other regional newspapers.

**SENIOR SYSTEMS
ANALYSTS
SENIOR PROGRAMMER
ANALYSTS**

\$24,000 to \$34,000

International corporation with headquarters in Louisville seeks experienced senior level Systems Analysts and Programmer Analysts to join leading edge data processing organization in the design, programming and implementation of new systems. Excellent benefits and career development potential.

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PLACEMENT FOR THE DATA PROCESSING PROFESSIONAL
CLIENT COMPANIES ASSUME OUR FEES
LOUISVILLE NASHVILLE DALLAS DRYTON**

Table 1 shows the results of a 1980 salary survey conducted in the region by Computer Career Consultants, Inc., of Louisville, Kentucky. Although direct comparisons with the state data processing classifications series is difficult without a detailed analysis of skill sets, it can be seen that computer professionals are very well paid compared with state workers in general. Unfortunately, given the dramatic growth of computer usage, the state is likely to fall further and further behind.

**TABLE 1
REGIONAL SALARY SURVEY
COMPUTER PROFESSIONALS**

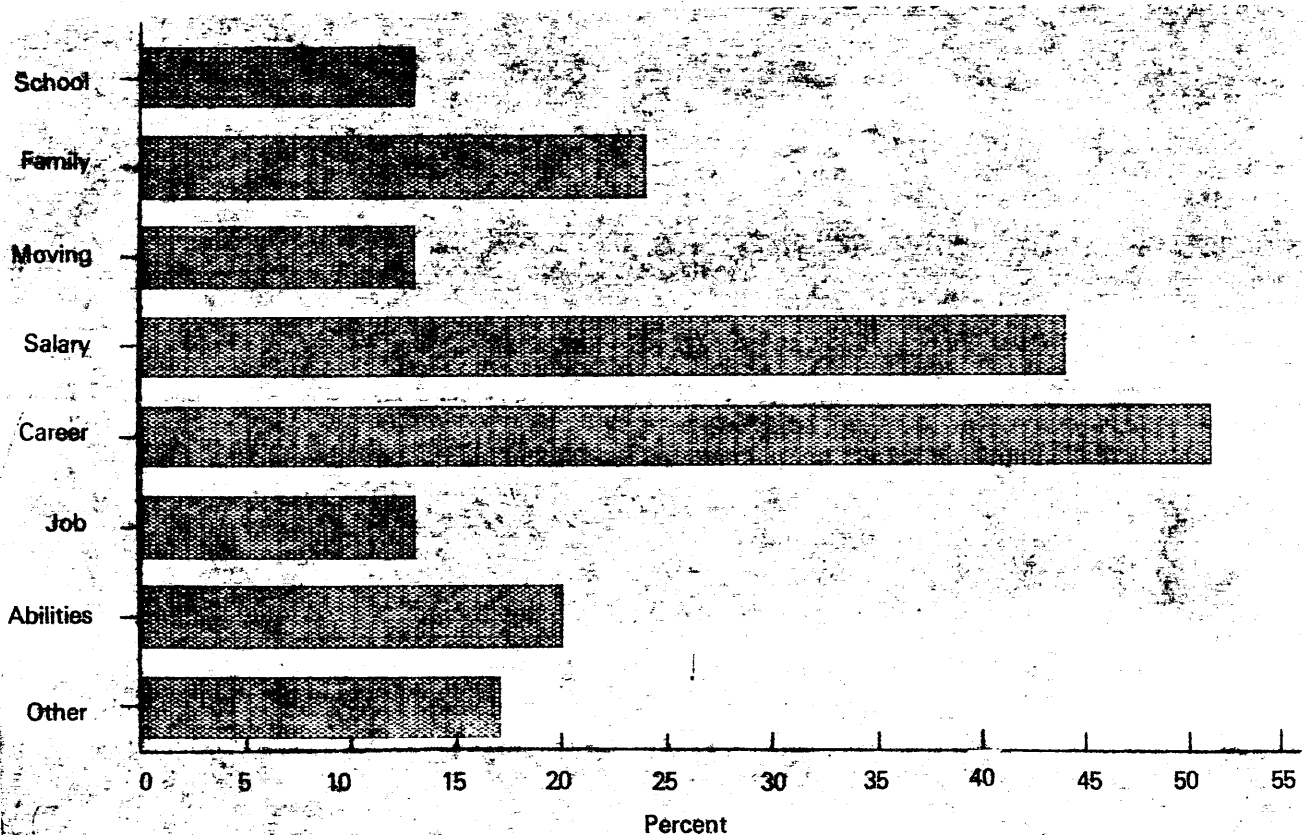
NON-MANAGEMENT	\$ RANGE	\$ MEDIAN
Programmers and Programmer Analysts	Junior - 12,200 - 19,800 Senior - 16,500 - 24,900 Lead - 18,200 - 28,100	15,800 23,500 23,500
System Software Programmers	Junior - 14,100 - 21,700 Senior - 18,300 - 27,600 Lead - 20,200 - 35,600	17,700 22,600 27,900
System Analysts Project Leaders & Consultants	Junior - 16,500 - 24,800 Senior - 18,200 - 28,900 Lead - 20,200 - 35,600	21,700 23,800 28,100
Specialists in Data Base, Data Communication EDP Audit	Junior - 17,600 - 25,800 Senior - 19,000 - 28,900 Lead - 22,300 - 36,100	21,500 24,400 28,400
Mini-Computer Programmers & Programmer Analysts	Junior - 11,400 - 18,500 Senior - 15,700 - 23,900 Lead - 17,800 - 27,700	14,600 18,700 23,300
MANAGEMENT	COMPANY SIZE	\$ MEDIAN
Technical Services System Software • Operating System • Data Base • Data Communication	Small	-----
	Medium	29,200
	Large	32,600
Systems and Programming	Small	27,300
	Medium	32,700
	Large	38,400
Operations	Small	23,200
	Medium	26,800
	Large	31,300
Management Information Systems	Small	29,500
	Medium	37,800
	Large	46,500

SOURCE: Computer Career Consultants, Inc., Louisville, Kentucky.

For approximately six months the Department of Personnel has been sending an exit questionnaire to individuals leaving state government employment. The response rate has generally been low and only 29 people classified in the data processing series had completed a questionnaire by May, 1981. Even so, the overwhelming reasons cited by these individuals for leaving state government employment were "Better Salary" and "Opportunity for Career Development." The major reasons for leaving are shown in Figure 10.

FIGURE 10

REASONS FOR LEAVING STATE EMPLOYMENT
DATA PROCESSING GROUP CLASSIFICATIONS
SEPTEMBER 1980, THROUGH APRIL, 1981



SOURCE: Department of Personnel

NOTE: Data unreliable, due to small, non-random sample of questionnaires returned during period of September, 1980, through April, 1981.

RECOMMENDATION

The Department of Personnel should take immediate action to revise the classification system and/or the salary scales for employees in the Data Processing Group to make state government more competitive with the private sector in this area.

Data Processing

Contracts for data processing work typically include specialized services that in many cases have been provided to agencies over a long period of time. Examples include:

- operating a general ledger with supporting journals for the State Fair Board in Louisville;
- maintaining files on Registered Nurses and Licensed Practical Nurses for the Board of Nursing;
- providing an accounting system and reports for the Commonwealth Credit Union;
- operating a billing and remittance system for the Public Employees Benefit Service; and
- subscribing to the National Association of State Racing Commissions for racing information and reports for the Kentucky State Racing Commission.

These services are often provided to the smaller state agencies and are usually tied to a vendor that specializes in that kind of application and has developed proprietary software or a large data base. For instance, the Racing Commission needs information that is already maintained and shared as part of the National Association of State Racing Information Systems.

Even though some of these data processing services could be mounted on the state's central computers, agencies would often have to hire additional personnel to enter the data into the system and provide maintenance, modifications, and manipulation of the computerized reports. Also, this choice could require a commitment on the part of agency management to become more closely involved with the data processing function. In the opinion of some state data processing professionals, many state administrators have farmed out the data processing work because they don't understand it very well and prefer not dealing with it. They couldn't farm it out to the old Bureau of Computer Services because that agency did not have that specific responsibility.

The recent consolidation of both hardware and software services for state government within the new Personnel and Management Cabinet should fill this void. Meanwhile, it appears that the particular types of personal services contracts in this area are probably quite cost-effective, especially since conversion to the state central facility, even if possible, would require additional manpower to implement and permanent staff to operate.

Equipment and Other

Computer services contracts in the "equipment/other" category generally include all the contracts that were not clearly within the other categories. Although these are few in number, they have accounted for some large dollar expenditures in recent years.

The contracts with the highest amounts were to two consulting firms that specialize in the new field of geographic information systems: Gates and Associates, and the Environmental Systems Research Institute. Basically, these contracts included translating data usually found on maps or aerial photographs into machine-readable form.

This process requires the use of a digitizer, which is operated by a person who manually interprets what he sees on a map and enters this information via the digitizer into a computer. The end result is a geo-reference data base which a computer can draw upon as a person would consult a library. The process of building a data base through digitization is very labor intensive. If there are time constraints involved, as there were with both the contracts mentioned in this category, many digitizers need to be operated simultaneously.

The alternative to contracting for these services would be to buy several digitizers, employ the people to operate them and locate the space to house them. Since many of the applications in this area are one-time projects, contracting for these services at this time is an efficient and cost-effective approach.

Conclusions

Table 2, Computer Services Rates, lists the charges to state agencies for usage of various hardware and peripherals maintained by the Department of Technical Services (old Bureau of Computer Services). Examination of this table indicates that the Department provides little beyond machinery for the use of other state agencies. Aside from its responsibilities as previously detailed in Chapter II, the agency is solely supported by chargebacks to agencies for machine usage.

The Department of Technical Services believes that agencies would have to pay a private vendor more to obtain the same caliber of hardware that it provides. This opinion was not researched through comparative analysis of the charges listed in Table 2 with those of private vendors—for two reasons: first, private vendors do not offer comprehensive machine availability. Secondly, even if they did, the nature of agency computer services contracts requires functions to be performed that are not available within the Department of Technical Services or part of its traditional responsibility.

Rather than give the Department of Technical Services the responsibility and authority to do many of the activities that have been performed by contract, the Brown Administration has elected at this point to create the new Department of Professional Services for this and other purposes. This Department is presently oriented toward the chargeback method of covering costs of operation, its method being similar to that of the Department of Technical Services. Table 3 lists the rates charged to other state agencies for various functions. These functions are described in Appendix A.

It remains to be seen whether the existence of this new agency will significantly affect the nature and number of computer services contracts. Due to the organizational upheaval caused by the reorientation of software-related activities and the time required to implement the new service functions, it may take one or two years to fully assess the effectiveness of the new department.

The management of computer services and computer contracts will remain a subject of particular importance, since it impacts operations critical to many other state agencies. A current draft of the Department's goals, objectives, and performance measurements as they apply to FY '82 objectives is included in Appendix B.

TABLE 2
COMPUTER SERVICES RATES
(HARDWARE USAGE)
EFFECTIVE JANUARY 1, 1981

COMPONENT	RATES
HP 168 CPU	
Batch	
Dedicated	\$ 475.00/hr.
Other	\$ 375.00
Interactive	\$ 475.00
UP 3033	
Batch	
Dedicated	\$1,200.00
Other	\$ 950.00
Interactive	\$1,200.00
Mass Storage	
Per 1000 I/O executes	\$.30
MSS Volume	\$ 30.00
Tape	
Per 1000 I/O executes	\$.25
Disk	
Per 1000 I/O executes	\$.20
Tape Storage	\$ 3.00 per year per reel
Tape Set Up	\$.75 per mount
Connect charge per interactive station	\$ 30.00
Connect charge per RJE	\$ 110.00
TSO connect charge	\$ 3.00 per hour
Micrographics	
Master	\$ 1.25
Duplicates	\$.06
Frames (Microfilm)	\$.01

SOURCE: Bureau of Computer Services (Department of Technical Services)

TABLE 3

**DEPARTMENT OF PROFESSIONAL SUPPORT
FY 1982 RATE SCHEDULE**

Function/Rate	SERVICE RATE
(B) Systems Design & Analysis - Level 1	\$ 32.00/hr.
(C) Systems Design & Analysis - Level 2	36.00/hr.
(D) Programming - Level 1	28.00/hr.
(E) Programming - Level 2	32.00/hr.
(F) Programming - Level 3	35.00/hr.
(G) Information Center Services	41.00/hr.
(H) Data Base Analysis	42.00/hr.

SOURCE: Department of Professional Support, June 15, 1981.

RECOMMENDATION

The operations of the Department of Professional Support should be reviewed in 1982 to determine effectiveness in meeting stated goals and objectives, especially as they relate to the management of computer services contracts.

APPENDIX A

DEPARTMENT OF PROFESSIONAL SUPPORT BILLABLE FUNCTION DESCRIPTIONS

(B and C) SYSTEM DESIGN AND ANALYSIS

The System Design and Analysis function provides direct user services in planning, consultation, documentation, and associated tasks leading to the definition of automated systems and their associated manual procedures. (Personnel providing System Design and Analysis services must be assigned to the Division of Systems Engineering or the Division of Special Projects.) The level (either 'B' or 'C') depends upon the current classification of the employee. Reference the list attached to determine the function assigned to each classification of employee.

(D, E, and F) PROGRAMMING

The Programming function provides data processing programming support in both new program development and existing program maintenance. New system development includes such tasks as: detail design, coding, testing, and documentation of programs, JCL, CLISTs, online screens and other program-oriented products. Also included are services of a technical nature rendered in direct support of programming personnel, such as cataloging and controlling source and object code on a short-term basis. (Personnel providing Programming services must be assigned to the division of Systems Engineering or the Division of Special Projects.) Reference the attached table to determine the function assigned to each classification of employee.

(G) INFORMATION CENTER SERVICES

The Information Center Services function provides direct user services in the preparation and execution of information center requests and consultation with agency users to prepare requests. Personnel also assist users in technical areas concerning usage of information center supported software packages or techniques. (Personnel providing these services must be assigned to the Division of Data Management.)

(H) DATA BASE ANALYSIS

The Data Base Analysis function is a direct service function providing specification, standards review, tuning, and other tasks associated with the development and support of data base technology when such activity is oriented toward solution of specific application or task. Consultation and advisory services in the same regard. (Personnel providing these services must be assigned to the Division of Data Management.)

APPENDIX B

PERSONNEL AND MANAGEMENT CABINET DEPARTMENT OF PROFESSIONAL SUPPORT

- FY 1982 Goals
- FY 1982 Objectives
- FY 1982 Performance Measurements
as they apply to FY 1982 Objectives

FY '82 GOALS

- To promote fiscal responsibility within the Department of Professional Support consistent with the Secretary of the Personnel and Management Cabinet's Goals.
- To promote productivity of Data Processing Resources within the Department of Professional Support.
- To provide/maintain a high level of customer service as relates to all products or services developed to Executive Branch agencies by the Department of Professional Support.
- To promote fiscal responsibility in the use of systems technology by Executive Branch agencies.
- To implement recommendations as regards data processing by the Governor's Executive Management Commission.

FY '82 OBJECTIVES

- To define budget requirements for the Department of Professional Support.
- To manage operational expenditures.
- To manage personnel expenditures.
- To assist organizational analysis within the Department of Professional Support.
- To assist the Office of Program Administration (Personnel and Management) in study of executive agencies as regards to information concerning systems technology.
- To provide regular management reports detailing status of progress toward all relevant Personnel and Management Cabinet Goals.
- To implement a Comprehensive Fiscal Information System.
- To implement cost effective automation.
- To assist executive agencies in the orderly planning of all systems development and maintenance activities within a three-year and one-year planning cycle.
- To implement in a timely and acceptable manner within resource constraints all planned and approved systems development and maintenance requests.

APPENDIX B CONTINUED

- To provide security or security mechanisms for user agency data and software as dictated by federal/state law.
- To manage DP resources as related to DPS services in such a way as to provide efficient, cost-effective services.
- To reduce interagency problems with DPS.
- To maintain accountability for all services provided to executive branch agencies in the use of DPS services.
- To assist all executive agencies in planning major systems development in accordance with each respective Secretary's goals and objectives.
- To provide accurate and timely estimates for approved systems development and maintenance.
- To standardize the systems development process so as to provide accurate cost/benefit data at defined points within the development cycle so as to provide agencies with decision points and approval process as regards fiscal status for systems development.
- To implement all approved and budgeted requests for service by DPS.
- To report both fiscal and request status in a timely and accurate manner.
- To support the Governor in improving state government through the use of industry leaders' recommendations.

FY '82 PERFORMANCE MEASUREMENTS

- Completion of budget requirements (Department of Professional Support) by June 15, 1981 for FY '81-'82.
- 5.5% reduction of DPS operational expenditures by June 30, 1982.
- Reduction of personnel staffing by 41 positions by June 30, 1982.
- Implementation of all organizational objectives for DPS by September 1982 (from Feb. 1, 1981 position complement of 342).
- Provide detailed information to OPA as required and maintain support level to OPA as required.
- Provide monthly management reports to Secretary by 10th of each month detailing status of all WPPR objectives for DPS.
- Implement a Statewide Accounting System as per Department of Finance requirements by June 30, 1982.
- Implement MMIS by December 31, 1981.
- Implement Statewide Payroll by December 6, 1981.
- Implement Statewide Personnel by April 1, 1982.

APPENDIX B CONTINUED

- Implement AVIS by December 31, 1981.
- DP control books for all agencies completed July 1, 1981.
- Execute all approved and planned development and maintenance for FY '81-'82 by June 30, 1982, defined in each agency's DP control book:
 - Monthly status on requests to all customers.
 - Reduce backlog by 50% (177 man years) for maintenance and development.
- Complete DPS security procedures by July 1, 1981.
 - No security violations for DPS programs/data.
- Reduce maintenance and development costs by 20% via:
 - Information centers: 15% of current development.
 - Development tools: maintain current service levels while sustaining 25% reduction in P/A series.
 - Implement development center concept as pilot by January 1, 1982 and full deployment by June 30, 1982.
- No written valid complaints for DPS services to Governor or Secretary.
- Provide weekly/monthly status on all service requests submitted by clients.
- Provide monthly billing detail by system/request/cost center/funding code for all clients as regards interaccounting by 15th of each month.
- Maintain full accountability in all billing procedures as regards federally approved cost allocation plan for Department.
- Hold monthly DP steering committee meetings with all executive agencies.
- Meet at least monthly with each executive agency DP liaison/secretary.
- Complete FY 1982 DP control books by July 15, 1981.
- Budget FY 1982 DP control books by July 15, 1981.
- Provide cost benefit analysis and advanced planning documents for all major systems development by August 15, 1981, for FY 1983.
- Provide updated cost benefit analysis and project schedule/workplan at the end of each phase of project development with client signoff to proceed.
- Execute all approved and budgeted requests for service for FY 1982.
- Provide monthly fiscal and project status reports for all requests for service to each executive agency DP liaison.
- Study and report to the Secretary monthly on the cost effectiveness and feasibility of all GEMC recommendations pertaining to the Department of Professional Support.
- Implement all approved GEMC recommendations by June 30, 1982.

